

EV-Smart Grid Research & Interoperability Activities

2014 DOE Hydrogen Program and Vehicle Technologies
Annual Merit Review

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Office of Vehicle Technologies

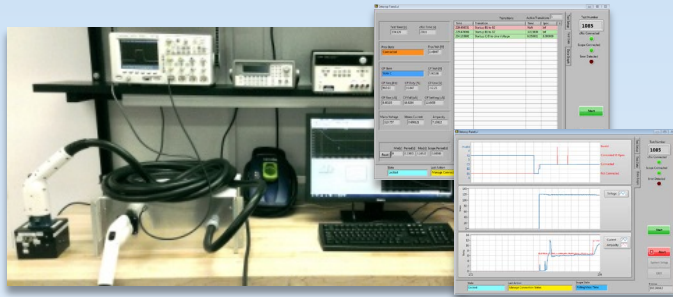
Poster Session

Project ID #VSS053

Accomplishments ... Tools/Technology

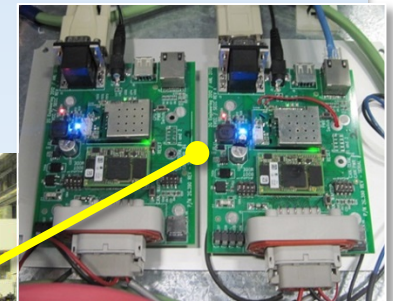
- **Test procedures and tools**

- SAE J2953 compatibility/interoperability
- SAE J1772 connector force measurement
- SAE J2954 wireless charging test fixture



- **Charging communication controllers**

- PEV/EVSE communication and emulation



Accomplishments ... Interoperability Center

200kW/480VAC Power

Integrated grid simulation, real-time grid data, and configurable branch circuit for smart charging and energy management studies

Electromagnetic isolation chamber w/ wireless charging test fixture

EV-Smart Grid Interoperability Center

150kW+ PEV/EVSE emulator

Interoperability test tools

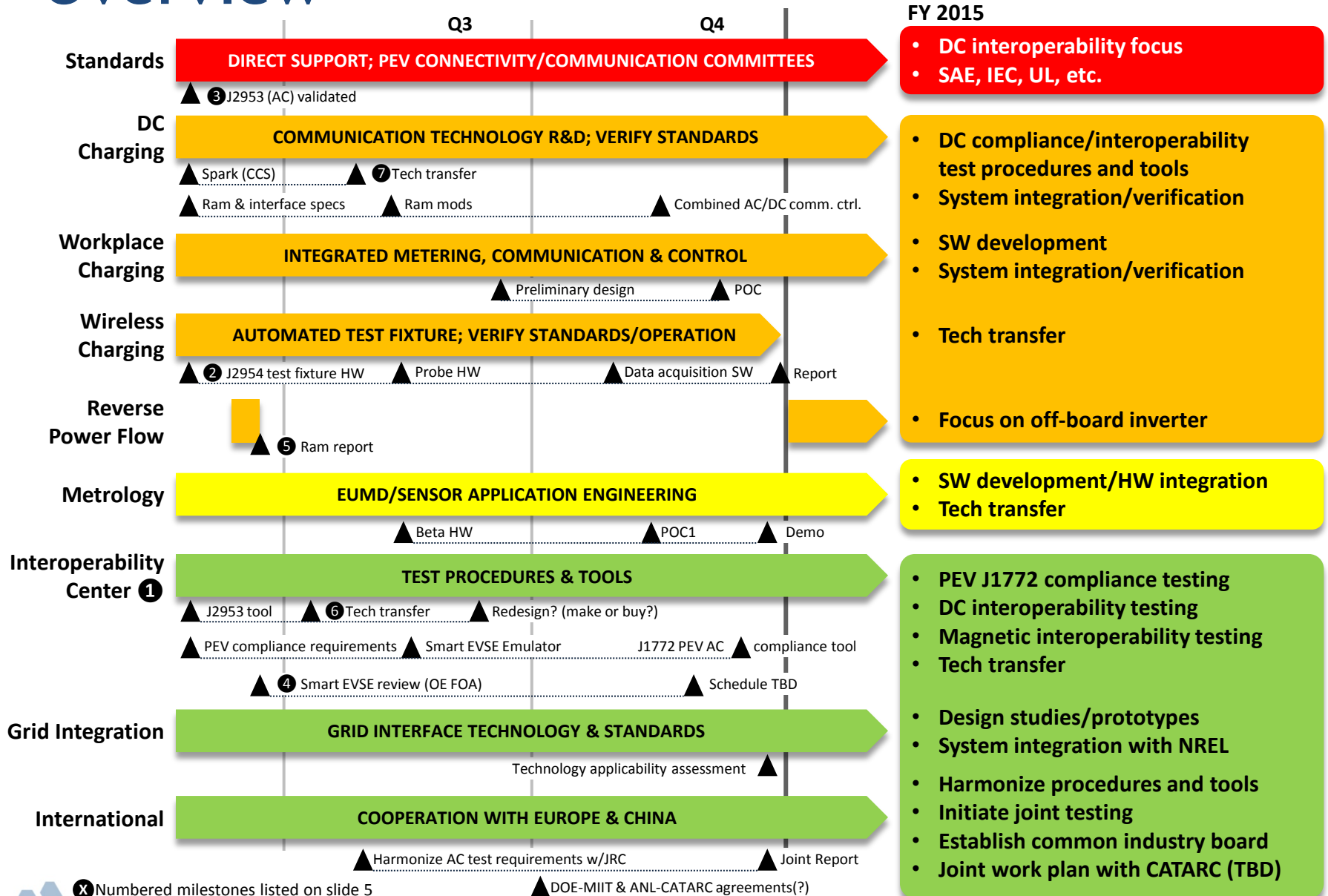
AC and DC EV Supply Equipment

Wireless test fixture

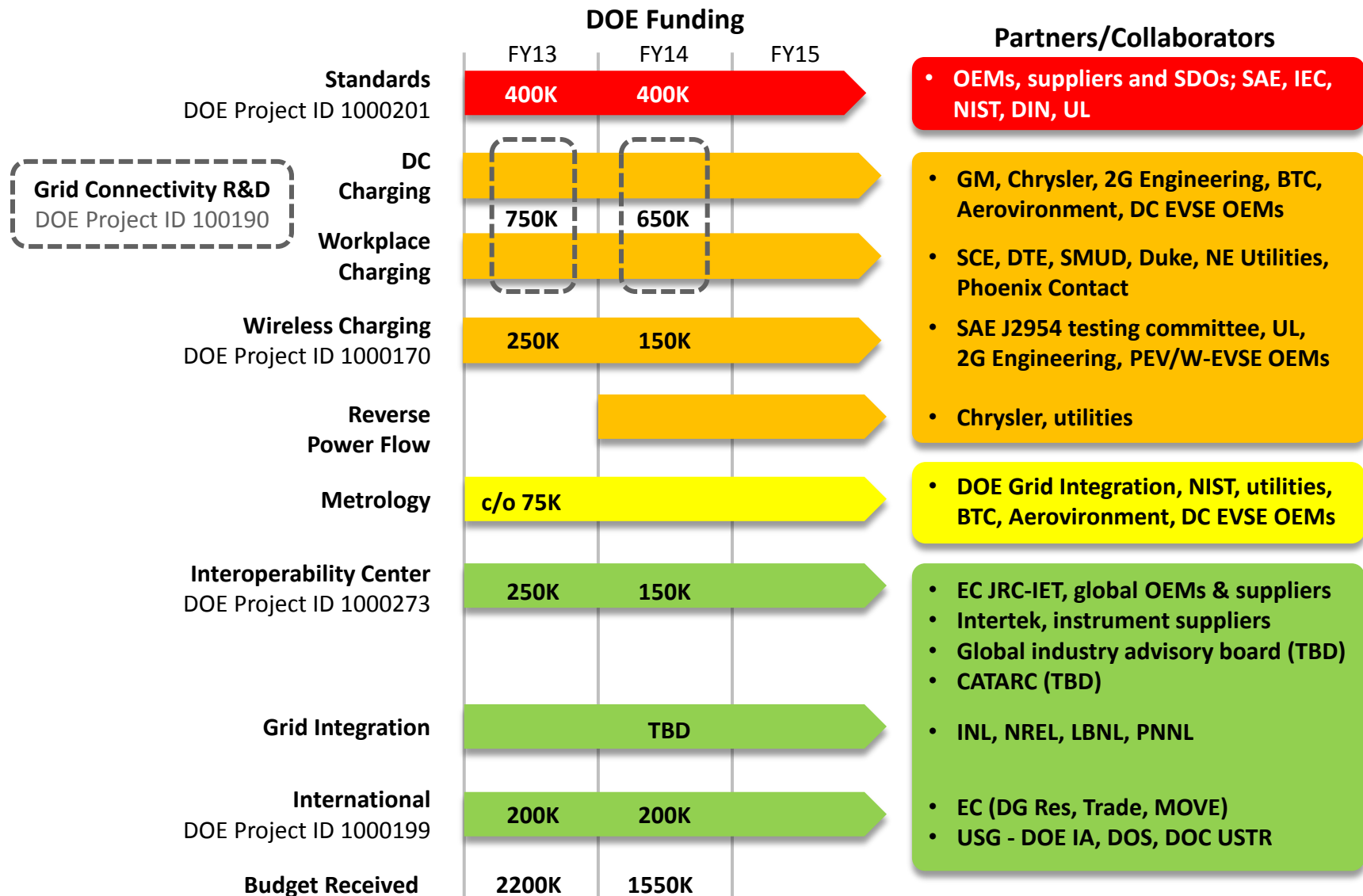
Embedded controls lab



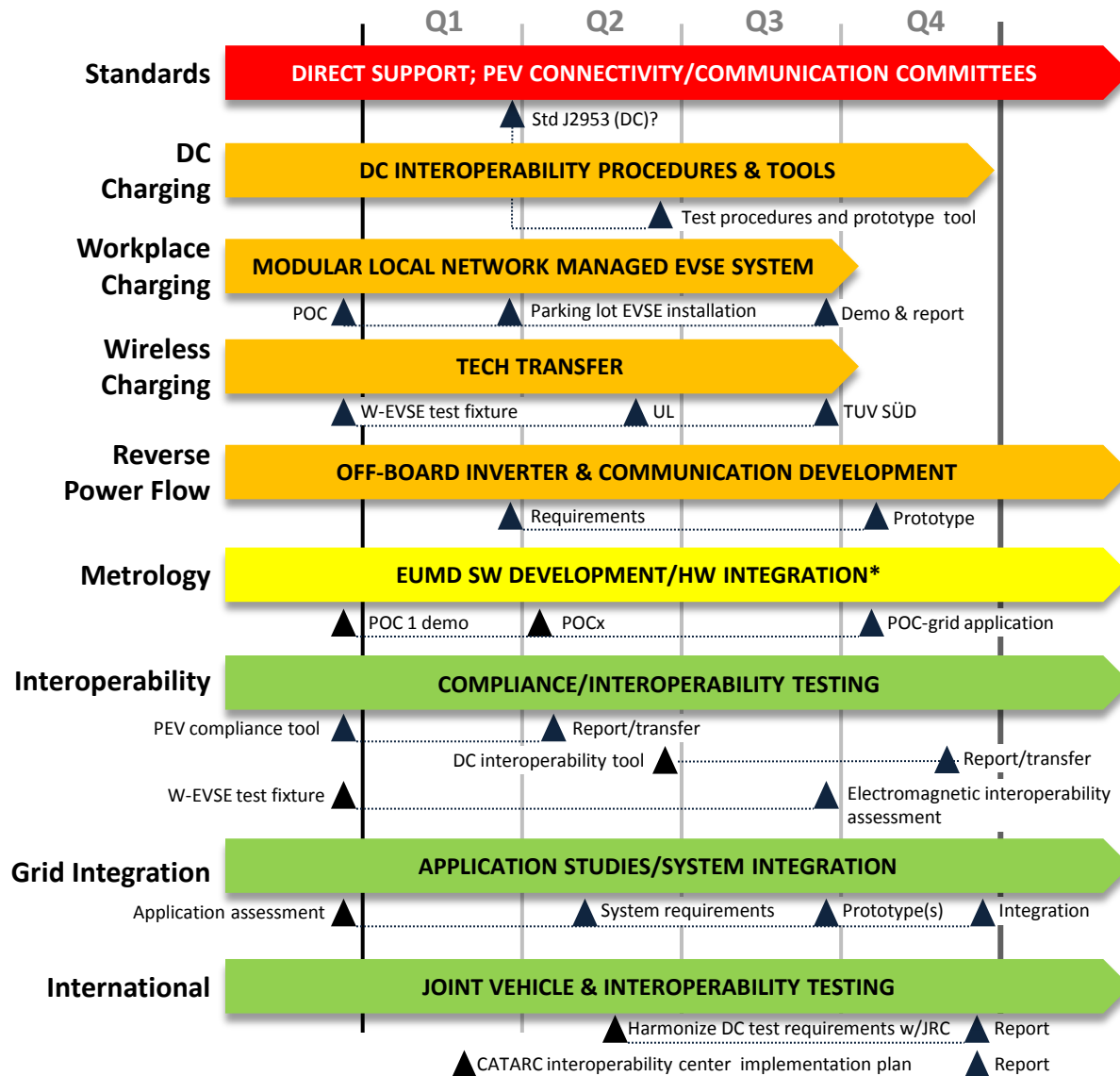
Overview



Collaboration/Coordination



Proposed Future Work



FY 2015 Objectives

- Consistent and harmonized AC & DC charging standards

- Transfer DC interoperability testing capability
- Verify network/energy management communication standards

- Standard W-EVSE testing capability at certification organizations

- Verify V2x standards for AC/DC

- Tech transfer
- Shift toward grid applications

- PEV J1772 compliance test capability
- AC/DC interoperability test capability
- W-EVSE field characterization and interoperability test capability

- System integration & demo at Argonne and NREL

- Harmonized procedures and tools
- Joint test reports
- Common global industry board
- Interoperability center at CATARC

